

□ PBS Retroperitoneal Fad Pat Weight (mg) OB 50 40 30 20

FIG. 1B

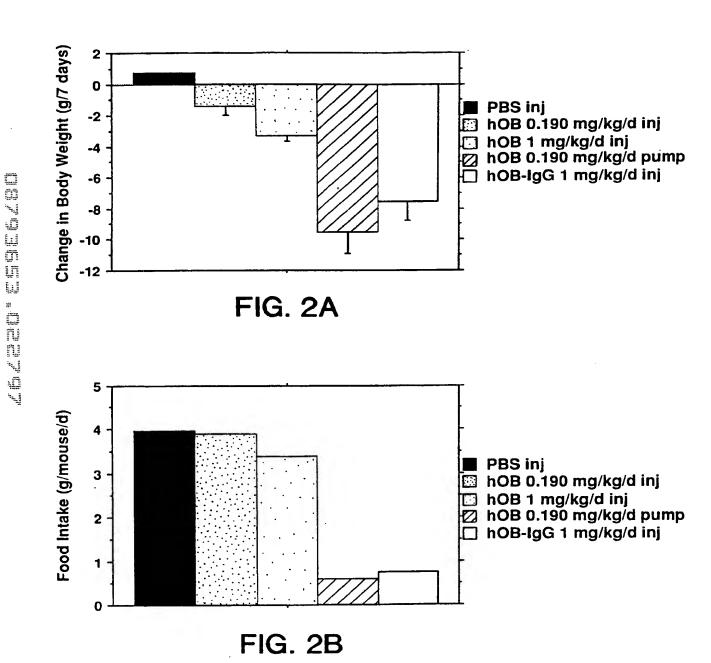
Injections

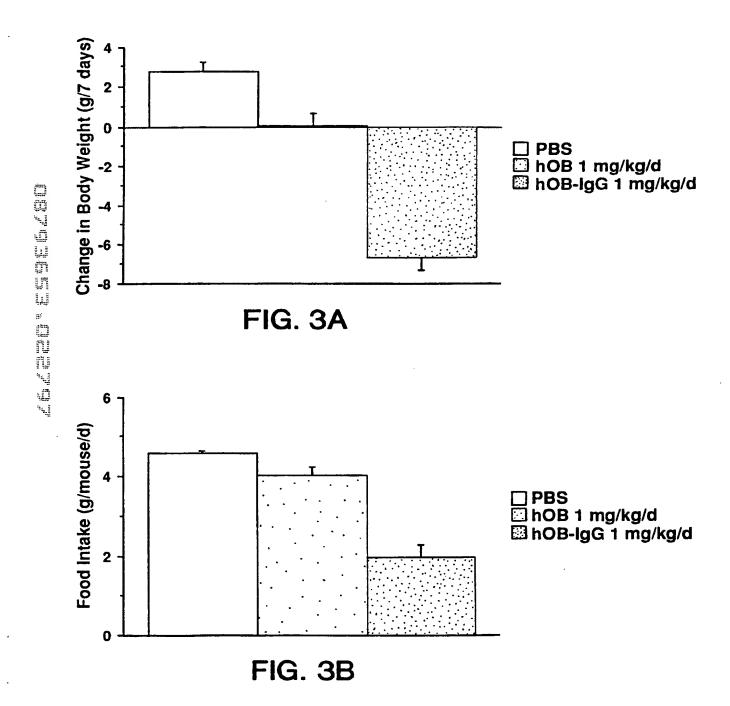
10

0

Pump







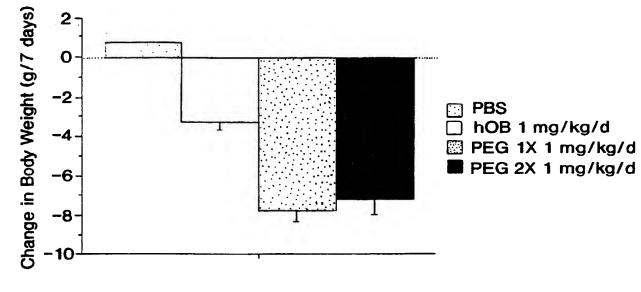
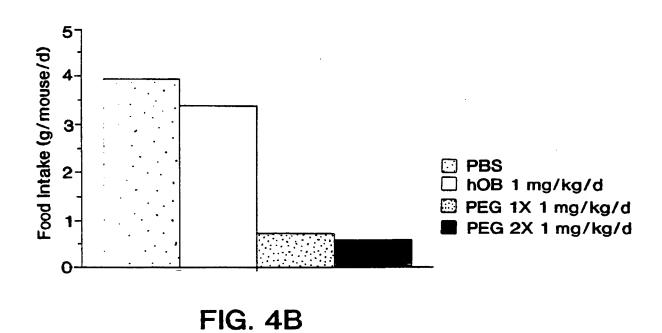
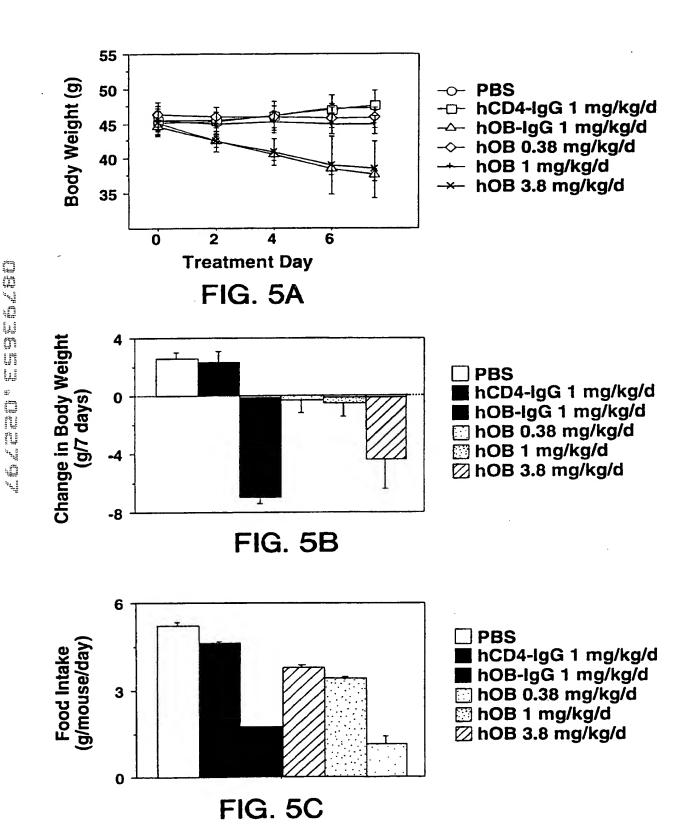


FIG. 4A



SUBSTITUTE SHEET (RULE 26)



ttagtt Aatcaa	mae I TGACGT ACTGCA	ndeI TCATAI AGTATA	
T TACGGGGTCA A ATGCCCCAGT	maell hinli/acyl ahall/bsaHl aatli TG ACGTCAATAA	aI p6I AC ATCAAGIGIA IG TAGTICACAI	6A
AT TA	H 4	P P P P P P P P P P P P P P P P P P P	

CGGT TCATGCGGG GATAACTGCA GTTACTGCCA ATGT TCCCATAGTA ACGCCAATAG GGACTTTCCA GCCA AGTACGCCC CTATTGACGT CANTGACGGT TCATA GCCCATATAT GGAGTTCCGC GTTACATAAC GTAT CGGTATATA CCTCAAGGCG CAATGTATTG TACA AGGGTATCAT TGCGGTTATC CCTGAAAGGT fnuDII/mvnI acil maeIII ahaII/bsaHI hinl1/acy1 **bsh1236**I bstul thaI maeII aatII maeIII csp61 1 TICCAGCICG CCCGACATIG ATTATIGACT AGITATIANT AGIAATCAAT AAGCTCGAGC GGGCTGTAAC TAATAACTGA TCAATAATTA TCATTAGT! CS 101 TIACGGIAAA TGGCCCGCCT GGCTGACCGC CCAACGACCC CCGCCCAT AATGCCATTT ACCGGGGGG CCGACTGGCG GGTTGCTGGG GGCGGGTA TIGACGICAA IGGGIGGAGI AITIACGGIA AACIGCCCAC IIGGCAGI AACTGCAGTT ACCCACCTCA TAAATGCCAT TTGACGGGTG AACCGTCA asel/asnl/vspl acil ss.pRK5tkneo.hOB1gG tru91 mseI bglI mael rmaI spel asul apyl[dcm+] ecoRII SCIFI haeIII/palI bgll bstNI mvaI dsav >human OB Clal/BstEII cloning acil Bau96I > length: 7127 (circular) >CMV enhancer/promoter hgiAI/aspHI aha II/bsaHI hinlI/acyI ec1136II bsp1286 **bsiHKAI** hgiJII banII aluI maeII Saci bmyI aatII sstl taqI > sites: std 201

FIG. 6B

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nialii styi ncol	dsal hphl acil	asul apyl(dcm+) bsil nlaili 301 aaatggcccg cctggcatta tgcccagtac atgaccttat gggactttcc tacttggcag tacatctacg tattagtcat cgctattacc atggtgatgc	ITTACCGGGC GGACCGTAAT ACGGGTCATG TACTGGAATA CCCTGAAAGG ATGAACCGTC ATGTAGATGC ATAATCAGTA GCGATAATGG TACCACTACG	nlalV	hgici	TGACGTCAAT GGGAGTTTGT TTTGGCACCA	ACTGCAGTTA CCCTCAAACA AAACCGTGGT	lule	sstI	Bacl	IIII	hglAI/aspHI	ec1136II	bsp1286	DSIHKAI	bmyI	DanII	A CAACTCCGCC CCATTGACGC AAATGGGCGG TAGGCGTGTA CGGTGGGGAGG TCTATATAAG CAGAGCTCGT T GTTGACGCGG GGTAAATGCG TTTACCCGC AATGCGAGA CCAAAAAAAAAA	GAIAIATIC GICTCGAGCA	
_		TATTAGTCAT CO	TAATCAGTA GO	hinl1/acyl	aha II/bsaHI	GACGTCAAT GO	CTCCAGTTA CO										I muli	CGTGGGAGG TO	screening A	
mae []	CQ	csp6I bsaAI NG TACATCTACG 1	ATCTACATCC A		1	TCCACCCCAT 1	ACGTCCCGTA A									rsal	19dso	TAGGCGTGTA C	אורנפנענעו	
	rs	CS TACTTGGCAG	ATGAACCGTC		TABAC	AGCGGTTTGA CTCACGGGGA TTTCCAAGTC TCCACCCCAT	TCCCCAAACT GAGTGCCCCT AAAGGTTCAG AGGTGGGGTA									1	acil	AAATGGGCGG	111111111	!
		GGCACTTTCC	CCCTGAAAGG		plei	CTCACGGGGA	GAGTGCCCCT									,	legal	CCATTGACGC		i
	H	nlaIII C ATGACCTTAT	TACTCGAATA		pl id	AGCGGTTTGA	TCCCCAAACT										III acii	CAACTCCCCC	20000010	
1681	csb	bsrI n	ACGGGTCATG			GGGCGTGGAT	CCCGCACCTA										mael	AATGTCGTAA		
I dsav bstni	/pall	apyl(dcm+) CCTGGCATTA	GGACCGTAAT		rsal	GIACATCAAT	CCAAAACCGT CATGTAGTTA CCCGCACCTA											AAATCAACGG GACTTTCCAA		
acil bgli dsaV sau961 bstNI	haellI/pall	AAATGGCCCG	TTTACCGGG			espoi 401 cettteeca gracatcaat geecetegai	CCAAAACCGT											501 AAATCAACGG GACTTTCCAA AATGTCGTAA	7701100111	
		301				401												201		

scrfi mval ecoRII

haeIII/palI

						1-0-1	
						1 100	
						eagI/xmaIII/eclXI	clXI
						eael	
						cfrI	
						fnu4HI	
						acii	
						thaI	
esp3I						fnuDII/mvn1	
BCIFI			•	sau961	SaCIL	sacII/sstII	
mval bsmAI				avall		nsoBII	
ecoR1I			••	asuľ	kspI		
Asa			c	nlalv	dsal		
bstNI hinlI/acyl	1X:			SCIFI	ball	ball ball ment	
apy1[dcm+]	,			ncii	saula mult batur	T hatti	
sauJAI qsul/bbmI				TO E	mhof /ndaff	Thought the transfer	
f-meb11fabe/Ioda			TOAM			1184 T 1181	
-			TOOM	1 T Bdu	applicame)	open toward came	
dpn1(dam+) ngaI tokI) KI		bpuAI	dsaV	dpnII(dam-) bsh1236I	bsh1236I	
dpnII[dam-] ahaII/bsaHI	BAHI	I Lum	I sqq I	Caull	alvI[dam-]	alwI[dam-] acil caull	
601 TIAGIGAACC GICAGAICGC CIGGAGACGC CAICCACGCI GIIITGACCI CCAIAGAAGA CACCGGGACC GAICCAGCCT CCGCGGCCGG GAACGGIGCA	ATCCACGCT (STTTTCACCT	CCATAGAAGA	CACCGGGACC	GATCCAGCCT	CCCCCCCC GACC	STGCA
AATCACTTGG CAGTCTAGCG GACCTCTGCG GTAGGTGCCA CAAAACTGGA GGTATCTTCT ^Beqin RNA	raggtgcga	CAAAACTGGA	GGTATCTTCT	GTGGCCCTGG	CTAGGTCGGA	GTGGCCTGG CTAGGTCGGA GGCGCCGGCC CTTGCCACGT	CACGT
tfil						fnu4HI	
acii						Tion	
thal hinfl				bstxt		1 2 2 1	
fnuDII/mvnI	1106	11	1 301169			1011 A 1111 A 11	•
	3		7 7 7 7	TOI SCAI		rundi/mvni trugi	rugi
Datol	mae]] rsal	<u>,</u>	nial coff haattivall	111/0311		1,0401	•

asel/asnl/vspl 701 TIGGAACGCG GAITCCCCGI GCCAAGAGIG ACGIAAGIAC CGCCIATAGA GICTAIAGGC CCACCCCCII GGCIICGIIA GAACGCGGCI ACAAITAAIA AACCTICCGC CTAAGGGGCA CGGTTCTCAC IGCATICAIG GCGGATAICI CAGATAICCG GGTGGGGGAA CCGAAGCAAI CTIGCGCCGA IGITAAITAI msel **bsh1236I** bstuI 'sp6 promoter bsajl pleI scfI haeIII/pall Inse scf1 hinf1 csp61 maell rsal maeIII [nuD[I/mvn] thal hinfl bsh1236I acii bstuI

FIG. 6C

sau961 avaII

Inse

SCFFI

ecoR11

mvaI

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CCACTCCCAG GTCCAACTGC

bsp1286

sau961 hae[11/palI

hinfI

ppul01 taqi nsii/avalii

mnlI

tfil

apyI[dcm+]

bell beal

bstNI

dsav

GTATTGGAAT ACATAGTATG TGTATGCTAA ATCCACTGTG ATATCTTATT GTAGGTGAAA CGGAAAGAGA GGTGTCCACA GGTGAGGGTC CAGGTTGACG

fokI

*sp6 RNA start

801 CATAACCTTA TGIATCATAC ACATACGATT TAGGTGACAC TATAGAATAA CATCCACTTT GCCTTTCTCT CCACAGGTGT

scf1

maell1 hph1

Met Histrpglyt hrieucysgl yPheleutrp LeutrpProt yrleuPhety rvalginala valProlleg InLysValgin 1001 AGATGACACC AAAACCCTCA TCAAGACAAT TGTCACCAGG ATCAATGACA TTTCACACAC GCAGTCAGTC TCCTCCAAAC AGAAAGTCAC CGGTTTGGAC AAAGTGTGTG CGTCAGTCAG AGGAGGTTTG TCTTTCAGTG GCCAAACCTG Aspaspihr Lysihileui leLysihrii evalihrarg ileasnaspi leSerHisih rGlnServal SerSerLysG lnLysvalih rGlyLeuAsp TGGAGCCAAG ATAGCTATAC GTAACCCCTT GGGACACGCC TAAGAACACG GAAACCGGGA TAGAAAAGAT ACAGGTTCGA CACGGGTAGG TTTTTCAGGT 901 ACCTOGGITO TATOGATATO CATIGGGAA COCTGIGGG ATTOTIGIGG CITIGGCOOT ATCTITICIA IGIOCAAGOT GIGCCCATOO AAAAAGICOA Idsm bsaWI agel maellI hphI bmyI fokI hpall cfr10I aluI moll I **bsmAI** agul mbol/ndeII[dam-] AGITCICITA ACAGIGGICC INGITACIGI dpn1[|dam-] dpn1[dam+] maeIII alwi[dam-] apy [| dcm+] sau3AI ecoR11 acil bstnI BCrFI dsav mval hohl Thuman OB start nlaIV Muni clal/bsp106 TCTACTGTGG TTTTGGGAGT mull ^cloning linker bsaJI

FIG. 6D

hphI

hgiJII bsp1286 bmyI banII

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mval bsmAI

ecoRII ecoRII

bsaAI

scrfl ncil mbol/ndeli|dam-|

bstY1/xhoI1

scrFI

scrFl mval bsaJI

bstnI

bstNI bsaJI

<pre>gau3AI mbol/ndell[dam-] dpn[{dam+} dpn11[dam-] alwI{dam-} naeII AGAAACGTGA TCTTTGCACT ArgAsnValile</pre>	styl gsul/bpml
alwNI sau3AI bsrI mbol/ndeli[dam-] bslI dpn[dam+] dpn[dam+] dpn[dam+] avall sau961 alw![dam-] alw![dam-] alw![dam-] ccaaga TGGACCAGAC ACTGGCAGTC TACCAACAGA TCCTCACCAG TATGCCTTCC AGAAACGTGA GGTTCT ACCTGGTCTG TGACGTGTCT AGGAGGGTC ATACGGAAGG TCTTGCACT GGTTCT ACCTGGTCTG TGACGTGTCT AGGAGGGTC ATACGGAAGG TCTTTGCACT ccttysw elaspointh rleualaval TyrGinGinf leLeuthrSe rMetProSer ArgAsnValile	haeIII/palI sau96I asul
mnli saujai b mbol/ndeii[dam-] dpni[dam+] dpnii[dam-] alvi[dam-] ACTGGCAGTC TACCAACAGA TCCTCAC TGACCGTCGA TGGTTGTT AGGAGTG	
alwni pfini bsii sau96i avaii asui cGA TGGACCAGAC ACT	pmlI eco72I
foki Catcctgacc Ttatccaa Gtaggactgg Aataggti oileleuthr Leuserly	Sau3AI
Bauli scrfi saulal barl mbol/ndel[dam-] dpn[[dam-] dpn[[dam-] dpn[[dam-] alwi[dam-] alwi[dam-] alwi[dam-] alwi[dam-] alwi[dam-] asuli barl acci batyl/xholl maell apyl[dcm+] foki asul barl batyl/xholl maell apyl[dcm+] foki asul barl acci batyl/xholl maell apyl[dcm+] foki asul barl accidential foki asul asul asul asul asul asul asul asul	

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					Ilodn	bpuAI earI/ksp632I		TCTTCCCC	AGNAGGGG	euPheProPro												maell	rsal	csp61	I bsrI bsaAI	CAACTGGTA	GTTGACCAT	eAsnTrpTyr	
					Ilodm Ilodm	pbnyI e	ppsI mull	GIGCCCAGCA CCIGAACICC IGGGGGACC GICAGICIIC CICIICCCCC	CAGTCAGAAG G	c oservalPhe L												drdI mnlI	leI	5 811	bbsI bsu361/mstII/sauI bsrI bsaAI	r CAGGTCAAGT T	A CTCCAGTTCA A	sCluAspPro GluValLysP heAsnTrpTyr	
I96nes		Ileve	ecoRII	dsaV	bstNI asuI	bsaJI nlaIV	apyI[dcm+]	rcc recesesa	AGG ACCCCCCTGG	suf euGlyGlyPr												drdI	mboll ddel	bpuAl eco811	bbs! bs	CCA CGAAGACCC	GGT GCTTCTGGG		
	SCIFI	I e v m				9	IVNI	AGCA CCTGAACT	TCGT GGACTIGA	oAla ProGluLe															maell	GTGG ACGTGAG	CACC TGCACTC	ValA spValSe	
					_	bsp1286	bmyI alwNI	CACC GTGCCC	SCTCG CACCCG	ropr ocyspr	СИЗСИЗ										nlalii	Idsu	IHdsu	E	[/san]	CATCC GTGGTG	STACG CACCAC	hrCys ValVal	
					nlaIII	Idsu	IHdsu	AAAACTCACA CATGCCCACC	TTTTGAGTGT GTACGGGTGG CACGGGTCGT GGACTTGAGG ACCCCCTGG CAGTCAGAAG GAGAAGGGGG	sThrHisT hrCys	START OF HUMAN 19G1 CH2CH3	gauget	nlalV									mnlI	dde! ns	asul eco811 maeIII	dpnII[dam-] bsu36I/mstII/sauI	ACCCCTGA GGTCA	CCTGGGGACT CCAGTGTACG CACCACCACC TGCACTCGGT GCTTCTGGGA CTCCAGTTCA AGTTGACCAT	rgthrProGl uValthrCys ValValValA spValSerHi	
					hoh	maeIII	acii bstEII		c ccagreere TT	162 Aspleuserp roglycysgl yvalthrAsp LysthrHisT hrCysProPr oCysProAla Progluleul euglyglypr oserValPhe LeuPheProPro	-START		2	Tosa	Tiend	1100	scrF1	nci I	dsav	gau3AI av	mbol/ndeII[dam-]	nlallI caull	rcal dpnI[dam+]	bspHI(dam-) as	I dpnII(dam-)	1501 CAAAACCCAA GGACACCCTC ATGATCTCCC GGACCCCTGA GGTCACATGC GTGGTGGTGG ACGTGAGCCA GGAGACCCT GAGGTCAAGT TCAACTGGTA	G TACTAGAGGG CC		
	ecoRII	dsav	Patrick	ball	bsaJI		bsadi	ដ	CTGGAGTCGG GACCCACGCC CCAGTGGCTG	erP roGlyCysG												-	ĭ	sty! b	bsaJI mnlI	CAA GGACACCCT	GTTTTGGGTT CCTGTGGGAG TACTAGAGGG	LysProly sAspThrLeu MetileSerA	•
						ddeI	moli	1401 GACCTCA	CTGGAGT	162 Aspleus														Ø	ā	1501 CAAAACC	CTTTCC	196 LysPr	

-1G. 6F

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262 AspTrpLeuA snGlyLysGl uTyrLysCys LysValSerA snLysAlaLe uProAlaPro IleGluLysT hrIleSerLy sAlaLysGly GlnProArgGlu

scrF1

1701 GACTGGCTGA ATGGCAAGGA GTACAAGTGC AAGGTCTCCA ACAAAGCCCT CCCAGCCCCC ATCGAGAAA CCATCTCCAA AGCCAAAGGG CAGCCCCGAG CIGACCGACT TACCGITCCT CAIGITCACG TICCAGAGGI IGITICGGGA GGGTCGGGGG TAGCICITIT GGTAGAGGIT ICGGITICCC GICGGGCTC

BCLFI	ecoRII	dsaV	econi batni	ball apyI[dcm+]	CCTGCACCAG	GGACGTGGTC	lLeuHisGln	fnu4liI	bbvI avaI
			hphI		TCACCGT	SAGTGGCA	SeuThrVa	Ę,	ភ្ន
				hgal mull	GACAAAGCCG CGGGACGAGC AGTACAACAG CACGTACCGT GTGGTCAGCG TCCTCACCGT CCTGCACCAG	CIGITICGGC GCCCTCCTCG TCATGTTGTC GTGCATGGCA CACCAGTCGC AGGAGTGGCA GGACGTGGTC	sthrLysPro ArgGluGluG InTyrAsnSe rthrTyrArg ValValSerV alLeuthrVa lLeuHlsGln	-	
	rsal	csp61	maell	bsaAI	CACGTACCGT	GTCCATGGCA	rThrTyrArg		taqī
			rsal	csp61	AGTACAACAG	TCATGTTGTC	lnTyrAsnSe		H
—				fnu4H1 mnlI	GGGACGAGC	cccrccrc	rgGluGluG		mnll
nsp8II kspI	dsaI	bsall	acil	fuu4HI	GACAAAGCCG C	CTGTTTCGCC G	sThrLysPro A	bsmA1	bsal
					1601 CGTGGACGGC GTGGAGGTGC ATAATGCCAA			rsaI	csp6I
		-		muli	CTCCACCTCC	CACCTCCACG	ValGluValH		
					CGTGGACGGC	GCACCTGCCG	ValAspGly		bsrI
					1601		229		

											dsaI	llsd	IsaJI	GCGACATCGC	CGCTGTAGCG	296 ProGlnVa lTyrThrLeu ProProSerA rgGluGluMe tThrLysAsn GlnValSerL euThrCysLe uValLysGly PheTyrProS erAspIleAla
														1801 AACCACAGGT GTACACCCTG CCCCATCCC GGGAGAGAT GACCAAGAAC CAGGTCAGCC TGACCTGCCT GGTCAAAGGC TTCTATCCCA GCGACATCGC	TIGGIGICCA CAIGIGGGAC GGGGTAGGG CCCTICTCTA CIGGITCTIC GICCAGICGG ACTGGACGGA CCAGITICCG AAGAIAGGGI CGCTGTAGCG	PheTyrProS
								~			I.	apyI[dcm+]		GGTCAAAGGC	CCACTTTCCG	uValLysGly
							scrFl	Inval	ecoRII	dsaV	bstnI	apy	DSpMI	TCACCTGCCT	ACTGGACGGA	euThrCysLe
							scrFI	mvaľ	ecoR11	dsaV	bstNI	apy![dcm+]	sexAl	CAGGTCAGCC	GTCCAGTCGG	GlnValSerL
							S	E	Ð	70	Д	P		GACCAAGAAC	CTCCTTCTTC	tThrLysAsn
 7.	ы	hpall	a V	caulI	cma I /pspA I		FI	1	>	11		bsaJI mboII	aval earI/ksp632I	GGCAAGAGAT	CCCTTCTCTA	rgGluGluMe
 1124	Idsm	hp	dsaV	Ca	Xma	Smal	SCIFI	nci1	dsaV	Caull	fokl	bsl1 bsa	bslI ava	CCCCCATCCC	: GGGGGTAGGG	ProProSerA
											rsal	csp6I	bsp1407I	GIACACCCTG	CATGTGGGAC	1 Trrthree
													Д.	AACCACAGGI	TTGGTGTCCA	ProGlnVa
														1801		296

fnuDII/mvnI

thaI

sacII/sstII **bsh1236I** bstuI

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	13/27
dsal hphi alui bsaji CAAGCTCACC GTTCGAGTGG	sapi mapi mapi mboli mnli bsmAi eari/ksp6321 bsli cauli GAAGAGCCTC TCCTGTCTC CTTCTCGGAG AGGCACAG nLysSerLeu SerLeuSerPro
mspl hpall hpall fnu4Hl fnu4Hl bbvl l901 CGTGGAGTGG GAGACAATG GAACAACTAC AAGACCACGC CTCCGTGCT GGACTCCGAC GGCTCCTTCT TCCTCTACAG CAAGCTCACG GCACCTCACC CTCTCGTTAC CCGTCGCCT CTTGTTGATG TTCTGGTGCG GAGGCACACA CCTGAGGCTG CCGAGGAAGA AGGAGATGTC GTTCGAGGC 329 ValGluTrp GluSerAsnG lyGlnProGl uAsnAsnTyr LysthrThrP roProValle uAspSerAsp GlyScrPheP heLeuTyrSe rLysLeuThr	mboli bpuAl bpuAl ppul0! mae!i mae!i ppul0! bspMI kha! bspMI bbv! asp700 nla!i! sfaN! mnl! cau;/ksp6321 bs!! cau; cau; cacctgttct cctcccctt ccctctctt cctcctctt cctcct
I FI nlaIV CCCGAC GCCTCC AGGCTG CCGAGG	ACAACC ACTACA TGTTGG TGATGI 18A8NH 18TYr1
pleI hinfI rcccgrccr cgacrcc agggCacca ccrcado	nlaili ppul0i nsi/avalli sfaNi mnli GAT GCATGAGGCT CTGC CTA CGTACTCCGA GACG
mnll AAGACCACGC CTC TTCTGGTGCG GAC	nla ppul0I nsil/av nlaIII sfaNI cat gctcctcat ccat ierc ysservalme this
III III IGA GAACAACTAC ICT CTGTTGATG	mboli bpual maell xmnl bbs1 asp700 cCAAC GTCTTCTCA!
mspl hpall fnu4HI bbvl share eccaeces strac eccaeces strac respect	fnu4HI xr bbvI ai 1GGCA GCAGGGG ACCGT CGTCCCC
GGAGTGG GAGAGG CCTCACC CTCTCG 1GluTTP GluSe	bspHI Gacaaga gcagg10 CTGTTCT CGTCCAC AspLysS erargTi
1901 CGT0 GCAC 329 Va	2001 GTG CAC 362 Val

					Inle	fnu4HI	ppvI	TATTGCAGCT	ATAACGTCGA	^sv40 early poly A
nlalil	fnu4HI haelII/palI	bglI styl	sfil ncol	eael dsal	cfrI bsaJI	aluI haeIII/palI	hindili acii asul	rice ecceptede cenacticit	AACC GGCGGTACCG GGTTGAACAA	^sv40 ear
		taqī	plei scfi	rmal sall pstl	xbal hincll/hindII	alul mael acci bsql alul	acci bspMi hindili hinfi bspMi hindi	AGCTTCTAGA GTCGACCTGC AGAAGCT	TCGAAGATCT CAGCTGGACG TCTTCG	
	tagi	sall	pleI scfI	rmal hincil/hindil	sau961 hinfl pstl	haell/ball bsql	asul mael acci bspMi h	2101 CGGTAAATG AGTGCGACGG CCCTAGAGTC GACCTGCAGA AGCTTCTAGA GTCGACCTGC AGAAGCTTGG CCGCCATGGC CCAACTTGTT TATTGCAGCT	SECERATTAE TEREGETECE GEGATETERE ETGGACGTET TEGAAGATET CAGETGGACG TETTEGAACE GEGGGTACEG GGTTGAACAA ATAACGTEGA	
								2101 CCCCTAAATC	CCCCATTTAC	396 СІУСУВ

H₉ FIG.

maglii 2201 tataatggtt acaaataagg caataggatg acaaatatga caaataaagg attittittga ctgcatigta gttgtggttt gtccaaagtg atgaatgtat Ataataggaa tgtttattg gttatggtag tgtttataagt gttatttgg taaaaaaagt gaggtaagat caacagggaa caggtttgag tagttagata

rmaí

mbol/ndeII[dam-]

sau3AI

dpnII [dam-] dpnI[dam+]

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mval

ppu10I nsll/avalll

sfaNI

nlaIV

SCIFI

mvaI

BCIFI

ecoRII

dsav

apyI[dcm+] bstni

BEXAI

IHdsu

Iyds Idsu

apyl[dcm+]

bsaJI

IIBqan IInad aluI

bstNI dsav

ecoRII

nlaIII

AGTCAGCAAC TCAGTCGTTG	acii foki TCCGCCCATC AGGCGCGIAG
2401 AGAACCAGCT GTGGAATGTG TGTCAGTTAG GGTGTGGAAA GTCCCCAGGG TCCCCAGCAG GCAGAAGTAT GCAAAGCATG CATCTCAATT AGTCAGCAAC TCTTGGTCGA CACCTTACAC ACAGTCAATC CCACACCTTT CAGGGGTCCG AGGGGTCGTC CGTCTTCATA CGTTTGGTAC GTAGAGTAA TCAGTCGTTG	nlaIV scrFI mva! ecoRII dsav bstNI apyl[dcm+] bsaJI cagrcrccag GCTCCCCAGAGT ATGCAAAGGTT AATCAGTCGT TGGTATCAGG GCGGGATTG AGGCGGTAG GCCCACACCT TTCAGGGGTC CGAGGGGTCG TCCTTTCGT ACGTAGAGTT AATCAGTCGT TGGTATCAGG GCGGGATTG AGGCGGTAG
CCAAACCATG	A ACCATAGTCC TGGTATCAGG
GCAGAAGTAT CGTCTTCATA	TTAGTCAGCA AATCAGTCG
TCCCCAGCAG AGGGGTCGTC	Ppul0I /avaiii i sphi nspi sfani nspli GCA TGCATCTCAA
GTCCCCAGGC	Ppul0 nsil/avall1 nlall1 sphl nspl sf nspll1 ATGCAAAGCA TGC
GGTGTGGAAA CCACACCTTT	AGGCAGAAGT
TGTCAGTTAG ACAGTCAATC	nlalv FI I RII NI I[dcm+] I G GCTCCCAGC
GTGGAATGTG	nlalv scrFI mval ecoRII dsav bstNI apyl[dcm+] bsaJI AAGTCCCAG GCTCC TTCAGGGGTC CGAGG
AGAACCAGCT	CAGGTGTGGA
2401	2501

Iesi	Csp6I	nlaiv	kpal	hgiCI	banI	asp718 mnlI	acc651 ddel acil	2301 CTTATCATGT CTGGATCGAT CGGGAATTAA TTCGGCGCAG CACCATGGCC TGAAATAACC TCTGAAAGAG GAACTTGGTT AGGTACCTTC TGAGGCGGAA	GANTAGTACA GACCTAGCTA GCCCTTAATT AAGCCGCGTC GTGGTACCGG ACTTTATTGG AGACTTTCTC CTTGAACCAA TCCATGGAAG ACTCCGCCTT		
							mnlI	TGAAAGAG GAACTTGGTT	ACTITCIC CITGAACCAA		
	haeIII/pall	haeI	styl	ncol	dsaI	bsaJI	nlalii mnli	CATGGCC TGAAATAACC TC	STACCGG ACTITATICG AG		
•	tru91		—	Ppv1	hinpi	:1/asnI/vspI	p700 hhal/cfoI nlaIII	ATTAA TTCGGCGCAG CAC	TAATT AAGCCGCGTC GTG	^sv40 origin	
pvul/bspCI mcrI	tagl[dam-] tru91	claI/bsp106[dam-]	Bau3AI	mbol/ndell[dam-]	dpn1[dam+] xmnI	dpnII(dam-)	nlaili alwi[dam-] asp700	TGT CTGGATCGAT CGGGA	ACA GACCTAGCTA GCCCT	, B,	
							In	2301 CTTATCA	GAATAGI		

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haelll/pall bsaJI mnll aluI

mn l I

mnlI

haeIII/palI

nlaIII

ncol styl

bslI dsal

bsrI

2601

Enu4HI bglI sfil

15/27

mbol/ndeII[dam-] fnutHI asuI apyI[dcm+] dpnI[dam+] sau961 2701 TCCAGAAGTA GTGAGGAGGC TTTTTTGGAG GCCTAGGCTT TTGCAAAAAG CTGTTAATTC GAACACGCAG ATGCAGTCGG GGCGGGGGG TCCCAGGTCC AGGICTICAT CACICCICCG AAAAACCIC CGGAICCGAA AACGITITIC GACAATIAAG CIIGIGCGIC IACGICAGCC CCGCCGCGCC AGGGICCAGG bsh1236I avaII CCCCCCTAA CTCCGCCCAG TTCCGCCCCAT TCTCCGCCCC ATGCCTGACT AATTTTTTT ATTTATGCAG AGGCCGAGGC CGCCTCGGCC TCTGAGCTAT GGCGGGGATT GAGGCGGGTC AAGGCGGGTA AGAGGCGGGG TACCGACTGA TTAAAAAAA TAAATACGTC TCCGGCTCCG GCGGAGCCGG AGACTCGATA hhal/cfol asul ecoR1I bstnI gau3AI scrFI haeIII/palI bstUI dsaV acil acil bsaJI mva [fnuDII/mvn1 sau96I nlaIV avall hinPI thaI mnll bsaJI acil sfani "TK promoter bsici bstBI alul msel taqi asull sful *start pUC118 tru91 acil bsall haellI/pall bsall stul rmal hael mael mnll avril blnI styl acil mull mnlI acil

hincil/hindil acil dpnii[dam-] bsmAi bglii dpnii dammbol/ndeII[dam-] 2801 ACTICGCATA TIAAGGIGAC GCGIGIGGGCC ICGAACACCC AGCGACCCIG CAGCGACCCG CITAACAGCG ICAACAGCGI GCCGCAGAIC IGAICAAGAG TGAAGCGTAT AATTCCACTG CGCACACCGG AGCTTGTGGC TCGCTGGGAC GTCGCTGGGC GAATTGTCGC AGTTGTCGCA CGGCGTCTAG ACTAGTTCTC bclI[dam-] bstYI/xhoII dpnI[dam+] sau3AI fnu4HI acil msel hgal tru91

fnu4HI bbvI scfl psti psd

haeIII/pall

hphi bshl2361 mnll

afllll

fnuDII/mvnI

bstul mluI hael taql

msel maelll tru91 hgal

tn5 neomycin phosphotransferase gene.

	O.G. FIG.				
BY		SUBCLASS			
		D 97/24440			
DRAFTSMAN		<u> </u>			

bsp1286 bmyI

bari

mnll

hpaII Idsm

1Hqsq

nlaIII

fok! alw![dam-]

bsaB1 [dam-] mam1[dam-] mn1I

eagl/xmalII/eclXI

eaeI cfrI

haeIII/palI fnu4HI acil

mbol/ndell[dam-]

gau3AI

dpnII[dam-] dpnI[dam+]

BCrI

2901 ACAGGATGAG GATCGTITCG CATGATIGAA CAAGATGGAT TGCACGCAGG TTCTCCGGCC GCTTGGGTGG AGAGGCTATT CGGCTATGAC TGGGCACAAC TGTCCTACTC CTAGCAAAGC GTACTAACTT GTTCTACCTA ACGTGCTCC AAGAGGCCGG CGAACCCAAC TCTCCGATAA GCCGATACTG ACCGTGTTG

16/27

bsp1286 bmy 1 nlaIV hgiCI DanI

narl scrFl

nlaiv

kasI ncil

hha1/cfol

hinPi

pstI scfl

hpall Idsm

haell hpall

hgiCI mspI hirll/acyl

ahall/bsaHl

hinPl

Idsm

fnu4HI acil

fnu4HI

banI dsav

begI TGAATGAACT	ACITACITOR							fnu4HI	bsrI bbvI	CTGGCTGCTA	GACCGACGAT
bsawi TCCGGTGCCC	אפרראירסייע אפרראירסייע									CCCCAACCCA	GCCCTTCCCT
drd1 GACCGACCTG			•				eco571	/aspl	maelli acil	GTCACTGAAG	CAGTGACTTC
TTTTGTCAA	hgiAI/aspHI bsp1286				HKAI	Ļ	maeII	tth1111/asp1	tagī	CCTCGACGTT	CGAGCTGCAA
cauli CGCCCGGTTC	hgi bsp	Inle	IInad	fnu4H1	bbvI bsiHKAI	hinPI bmyI	hhaI/cfol	mstI nspBII	aviII/fspI	CCCCACCTGT	CGCGTCGACA
hhal/cfol cauli	7777							E	Ŕ	GCCCTTCCTT	CCCCAAGGAA
1001 AGACAATGG CTGCTCTGAT GCCGCCGTGT TCCGGCTGTC AGCGCAGGG CGCCCGGTTC TTTTTGTCAA GACCGACCTG TCGAATGAACT	TCIGITAGCC GACGAGACIA CUGCGCACAA AGGCCGACAC ICGCGICCCC GCGGCCCAAA AGGCCGACAAAAAAAAA AGGCCGACAAAAAAAA				haelII/palI	mscI/ball	haeI	eael	cfrI	3101 GCAGGACGAG GCAGCGCGGC TATCGTGGCT GGCCACGACG GGCGTTCCTT GCGCAGCTGT GCTCGACGTT GTCACTGAAG CGGGAAGGGA CTGGCTGCTA	CGICCIGCIC CGICGCCCCG AIAGCACCGA CCGGIGCIGC CCGCAAGGAA CGCGICGACA CGAGCIGCAA CAGIGACIIC GCCTICCCI GACCGACGAI
sfani bsli GAT GCCGCCGTGT	נפרנפריים		/mvnI		19	E	£	a		TATCGTGGCT	ATAGCACCGA
bbvi sfal	GACGAGACIA fnu4HI	thal	funDII/mvnI	bstul	bsh12361	hinpi	fuu4HI	bbvI acil	mnll hhal/cfol	GCAGCGCGG	CGTCGCGCCG
AGACAATCGG	TCTGTTAGCC								ICE	GCAGGACGAG	cercerecre
3001										3101	

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The first that the first the first that the

Hen Hall Are don the Call Co.

bsaJI sfaNI

alw1[dam-]

hhal/cfol

bstNI

bmyI bshl236I

bsp1286

	17/27	
<pre>sau3AI mbol/ndeI1[dam-] dpn1[dam+] dpn1I[dam-] alv1[dam-] ACGCTTG TGCGAAC</pre>	m-] pI 511 rI/ksp6321	
fnu4HI ml acii di acii bbvi acii a r cccccctc crivccrif	saulAI fokI saulAI dpnI{dam+} mbol/ndeII{dam-} dpnI{dam+} taqI{dam-} tc GATCAGGATG ATCTGGAC AG CTAGTCCTAC TAGACCTG	sty! ncol dsa!
nlalil sfani TCCATCATGG CTGATGCM AGGTAGTACC GACTACGTJ	mspl hpall fokl efr101 ggarggaage eggeerre cetacerree gecagaac	sau3AI mbol/ndell[dam-] dpnI[dam+] dpnII[dam-] bstI/xholl
### ##################################	rsal csp61 bsaAI bsaAI bsaAI bsaAI bsp1286 mbol/ndeIl[dam+] bsp1286 taqI bsiHKAI palI bspHI taqI sfaNI bmyI maeII fokI cfr10I taqI[dam-] dpnII[dam-] tagCCCTAC CTGCCCATC GCAACATC GCATCGAGC CGCTTTGTC GATCGAGTG ATCTGGACGT TAGGCCGTAG CTGTGTTC GTTTGTAGC GTAGCTGCT TAGGCCGATG GACGCTAC TAGACCTGCT TAGGCCGATG GACGGTAGC TAGACCTGCT TAGGCCCATG GACGGTAGC TAGACCTTCC GATCAGACTGCTAGCTGCT TAGGCCCATG GACGGTAGC TAGACCTTCC GATCAGACTGCT TAGGCCCATG GACGGTAGC TAGACCTTCC GATCAGACTCTTCC TAGACCTCCTCCTTCCTCCTTCCTCCTTCCTTCTTCTTCTTCT	sphinspl nsplinsplinspliphinpl hinpliphai/cfoliphai/cfoliphai ecrrifudDII/mvniecrifudDII/mvniecrifudDII/mvniecrifudDII/mvniecrifudDII/mvniecrifudDII/mvniecrifudDII/mvniecrifudDII/mvniecrifudDII/mvniecrifudDII/mvniecrifudDII
<pre>sau]AI mbo!/nde!1[dam-] dpn![dam+] dpn!I[dam-] bstY!/xho!! alv![dam-] GGATCTCCTG TCATCTCACC CCTAGAGGAC AGTAGAGTGG</pre>	gI Gaccaccaag Cgaacat Ctggtggttc gctttgta	I/mvn!
scrFI ncil ncil mspl hpall dsav caull bsaJI 3201 TTGGGCGAAG TGCCGGGGCA AACCCGCTTC ACGCCCCGT	mspl hpall bspHI taqI ATCCGCTAC CTGCCCATTC G	hinpi thai fnuDii bstui hgiJii
3201	3301	

FIG. 6L

SUBSTITUTE SHEET (RULE 26)

PCT/US96/20718

APPROVED 0.G. FIG SUBCLASS BY wo 97/24440 DRAFTSMAN

18/27

hhaI/cfoI

hinPI

rsrII/cspI

acil acil

cpol

balI

Bau96I avall asul

hpaII

Idsm

cfr101

haeIII/palI fnu4HI acil

eael cfrI

nlaIII

nael

hinfi bbvi sfaNI

fnu4HI

tfii

fnu4HI

Ilodm Bapl

eco571 aluI aciI

earI/ksp632I

fuu4HI acii

hinfi

taqI

3701 TGACGAGTIC TICTGAGCGG GACTCTGGGG TICGAAATGA CCGACCAAGC GACGCCCAAC CTGCCATCAC GAGATTICGA TICCACCGCC GCCTICTAIG ACTECTICASE ANGACTICECE CTGAGACCECE AAGETTARET GGETGGTTEG CTGEGGGTAGTG CTCTAAAGET AAGGTGGEGG CGGAAGATAC 3501 CCGAATATCA TGGTGGAAA TGGCCGCTTT TCTGGATTCA TCGACTGTGG CCGGCTGGGT GTGGCGGACC GCTATCAGGA CATAGCGTTG GCTACGGGAC GGCTATATAGT ACCACCCTAAA AGACCTAAGT AGCTGACACC GGCCGACCCA CACCGCCTGG CGATAGTCCT GTATGGCAAC CGATGGGGAC CCTCCTGCTT TACGGTATCG CCGCTCCCGA TTCGCAGCGC ATCGCCTTCT ATCGCCTTCT TATAACGACT TCTCGAACCG CCGCTTACCC GACTGGCGAA GGAGCACGAA ATGCCATAGC GGCGAGGGCT AAGCGTCGCG TAGCGAAGA TAGCGGAAGA bsrBI acil fnu4HI DSPMI ahaII/bsaHI hinlI/acyl haeIII/palI hgaI eaeI cfrI taqI mnll 3601 ATATTECTGA AGAGCTTGGC GGCGAATGGG CTGACCGCTT hinfI acrl tfil

taqı bstBI

Injs

asulI bsici

hinfi

mboll barBI

ddeI

acil

xmal/pspAI

SCIFI

bstY1/xholI

gsul/bpml

ahall/bsaill

hinl1/acy1

thal sau3AI bsll fnuDI1/mvn[

Smal

hpall

nci 1 msp1 dsaV cauII

bslI

19/27

GCTCTGGGGT AACCCCGGTT ATGCGGGGGC AAAGAAGGAA AAGGGGTGGG 4001 TCATAAACGC GGGTTCGGT CCCAGGGCTG GCACTCTGTC GATACCCCAC CGAGACCCCA TTGGGGCCAA TAGGCCCGGG TTTCTTCCTT TTCCCCACC ACCCCGCTG GATGATCCTC CAGCGCGGG ATCTCATGCT GGAGTTCTTC GCCCACCCCG GGAGATGGGG TITCCAACCC GAAGCCITAG CAAAAGGCCC TGCGGCCGAC CTACTAGGAG GTCGCGCCCC TAGAGTACGA CCTCAAGAAG CGGGTGGGGC CCTCTACCCC GAGGCTAACT GAAACACGGA AGGAGAAT ACCGGAAGGA ACCCGCGCTA TGACGGCAAT AAAAAGACAG AATAAAACGC ACGGGTGTTG GGTCGTTTGT CICCGAITGA CTIIGIGCCI ICCICIGIIA IGGCCIICCI IGGGCGCGAI ACIGCCGITA IIIIICIGIC IIAITITGCG IGCCCACAAC CCAGCAAACA Caull HSV1 tk terminator Smal-Pvull bsaJI ncil dsav bsaJI ball aval Ilodm fnuDII/mvnI **bsh1236I** bstul Iloqu thaI acil Imdd/Iusp haeIII/pall mbol/ndell[dam-] mbol/ndell[dam-] nlallI 196nes dpnII[dam-] acil dpnII[dam-] nlaIV dpn1[dam+] bstUI dpn1[dam+] asuI hinPl alwi[dam-] cfr101 fokl alwi[dam-1 bsh12361 hha1/cfo1 bslI **bsmAI** bsal Invm/IIQun] hha I/cfoI mn 1 C **bsh1236I** AGTATTTGCG CCCCAAGCCA GGTCCCCGAC CGTGAGACAG CTATGGGGTG FIG. hinPI sau JAI bstul thaI bsawl nlalv acil taqI hpall Idsm nael hpa11 asul apyl[dcm+] SCIFI Caull 3801 AAAGGIIGGG CIICGGAAIC GIITICCGGG hpall dsaV ncil nspl **DSmAI** ecoRII bstNI bsaJI BCLFI dsaV mval bsaJI ball nlaIV Bau96I AVAII hinfI funDII/mvnI bsh12361 bstul thai mn 11 3901

	20/2/	
bsli sau961 nlaIV avaII styl avaII styl asuI ncoI ppuMI dsaI ecol091/draII thll11/aspl nlaIII	fok TTTTGGA AAAACCT	bstol halfeld that hinp! har! fuuDII/mvn! hinli/acy! bstUl hgiC! bsh1236! hae!! aci! ban! bsl! hhal/cfol aha!!/bsaH! A CCACCGCGC CATTTCTGC T GGTGCGCGC CTAAAGACG
######################################	bsri Caccactesa Gigcigacct	thaI thaI fnutHI bbvI scrccca accccaaAAA CC
hgiJII bsp1286 bmy1 scrf! mval ecoRII dsav bstNI bsaJI sau961 baJII fnu4HI aguI banII bbVI maeII aciI AGCCCAGG CTCGCAGCC GCC TCCGGTCC GAGCGTCGC CCG	ATTCTTTGG GCGTTGCGTG TAAGAAACC CGCAACGCAC	hinll/acyl ahaIl/acyl ahaIl/bsaHI bull/mvnl ncil bstUl mspl hinPl hpall bsrl bshl2361 dsav hgal 61 hhal/cfol caull TGACCGCG ACACGAACAC CGCGCTCTG TG
S bsli hphi b bsli hphi b bsli hphi caccccaa greegerga A creegerga	4201 ATGGGGAATG GTTTATGGTT TACCCCTTAC CAATACCAA	scrfi mval sau961 ecoRII tl dsav rsal fi bstNI avalI nlaIII bslI asul nsplI apy1[dcm+] acil csp ccGACCCGTA CCTGGCGTAC A

aluI

acil ball

nlaIII

bcdI

acii

fnu4HI

bpuAl Iloqu

bbsI

nlalII

GCGCCGACGA TAGTCATGCC

bsh12361

bstul bsawI fnuDII/mvnI

hinpi mspi

hha I/cfoI

hpall

thaI

CCCCCCCAC CGGAAGGAGC sececeere ecerteere

21/27

bsaJl

acil

fuuDII/mvnI sacII/sstII haelII/pall bsh12361 bstul acil nspBII thaI kspI mcrl dsal

hphI eag1/xmaIII/eclXl dsaI bsaJI

cfrI eael maeIII bstEII

mull hhal/cfof eco47III haeII

hinpi

csp61 rsal

mbol I

BfaNI

GCCGCCGGAC GAACTAAACC TGACTACGGC ATCTCTGCCC CTTCTTCGCT GGTACGAGGA GCGCTTTTGT TTTGTATTGG TCACCACGGC CGAGTTTCCG bslI

COGCOCCTG CTTGATTTGG ACTGATGCCG TAGAGACGGG GAAGAGCGA CCATGCTCCT CGCGAAAACA AAACATAACC AGTGGTGCCG GCTCAAAGGC fnu4HI

4401

hpall Idsm

scrFl mva1 Caull BCIFI dsaV ncil

nlarv hgict

ecoR11 dsav bslI bslI

bstni bsaJl bsaJI sau961

nlalV haeIII/pall asul cfrI avall eael

bsp1286 nlalV hpall

CCCCACCCCC CCCAGGCCAC CTGTCCTACG AGTTGCATGA TAAAGAAGAC AGTCATAAGT ppuMI mspI apyI[dcm+] eccol091/drall banl Day I 4501

GECETGGGGE CGGTCCCGTG GACAGGATGE TCAACGTACT ATTICTICTG TCAGTATTCA CGCCGCTGCT ATCAGTACGG ^pBR322 sequence

SUBSTITUTE SHEET (RULE 26)

Invm/IIdun1

bstul

fnuDII/mvnI

hinPI thal

eag1/xmal11/eclXI

eaeI notI

haeIII/palI

BCrI

fnu4HI

bstul scfl **bsh1236I**

hinpi

fnu4HI

oaroassa acerror

thaI

22 / 27

hpall

cfr101

maell

nael

TGACTGGGTT GAAGGCTCTC AAGGGCATCG GTCGAGCGGC CGCATCAAAG CAACCATAGT ACGCGCCCTG TAGCGGCGCA TTAAGCGCGG CGGGTGTGGT ACTGACCCAA CTICCGAGAG TICCGIAGC CAGCICGCCG GCGIAGIIIC GIIGGIAICA IGCGCGGGAC AICGCCGCGI AATICGCGCC GCCACACA

sfani taqı cfri sfani

barl

4601

bsrBI acil

ncrl

aciI

fnu4HI

'Hl3 ori delta 3

hhaI/cfoI

hinpi

msel bshl236I

tru91 acil

fnu4HI acii

rsal hhal/cfol

csp61 bsl1

hhal/cfol hhal/cfol

I I oqui

bsrBI acil

hha I/cfoI haell mael

hinPI haeII

rmaI

	haeIII/palI	sau96I	asul	11GGGC	Acccc		bslI avaI
	maell	dralll	bsaAI	TGGTTCA CGTAC	ACCAAGT GCATO	bslI	bslI
			IhphI	80) CAAGCTCTAA ATGGGGGGT CCCTTTAGGG TTCCGATTTA GTGCTTTACG GCACCTCGAC CCCAAAAAAC TTGATTTGGG T GATGGTTCA CGTAGTGGG C	STICGAGAIT TAGCCCCCGA GGGAAAICCC AAGGCIAAAI CACGAAAIGC CGIGGAGCIG GGGTITIIIG AACTAAACCC ACTACCAAGI GCAICACCCG		bsrl
				IC CCCAAAAAC	G GCCTTTTTG	pleI	hinfi
	nlaIV	hgiCI taqI	banl mull	G CCACCTCGA	C CCTCCACC	tru91	msel
				GTCCTTTAC	CACGAAATG	eI	hinfl maell
			nlaIV	TTCCGATTTA	AAGGCTAAAT	maell plef	drd1 hi
	9			CCCTTTAGGG	GGGAAATCCC		
Viein Heijii	bsp1286	bmyI	DanII	ATCGGGGGT	TAGCCCCCCA		
			aluI	CAACCTCTAA	GTTCGAGATT		
				801			

4901 CATCGCCCTG ATAGACGGTT TITCGCCCCTT TGACGTTGGA GTCCACGTTC TTTAATAGTG GACTCTTGTT CCAAACTGGA ACAACACTCA ACCCTATCTC GTAGCGGGAC TATCTGCCAA AAAGCGGGAA ACTGCAACCT CAGGTGCAAG AAATTATCAC CTGAGAACAA GGTTTGACCT TGTTGAGT TGGGATAGAG

SUBSTITUTE SHEET (RULE 26)

GGTTACGCGC AGCGTGACCG CTACACTTGC

maeIII bbvI maeIII

bsh1236I

bstuI

fnuDII/mvnI

hhaI/cfoI

thaI

hinpi

fnu4HI

apol tru91 tUI msel

tru9I

bsh1236I

apol

aluI

msel bstul

tru91 mseI

tru9I mse1

fnuDII/mvnI

thal

5001 GGCTATICT TITGAITIAT AAGGGAITIT GCCGAITICG GCCTATIGGI TAAAAAIGA GCIGATITAA CAAAAITIA ACGCGAAITI TAACAAAAIA cccataaga aaactaaata ttccctaaaa cggctaaagc cggataacca atttttact cgactaaatt gttttaaat tgcgcttaaa attgtttat

haeIII/palI

AATTGCAAAT GTTAAAATAC CACGTCCGGA GCACTATGCG GATAAAAATA TCCAATTACA GTACTATTAT TACCAAAGAA TCTGCAGTCC ACCGTGAAAA TTAACGTTTA CAATTITATG GTGCAGGCCT CGTGATACGC CTATTTTAT AGGTTAATGT CATGATAATA ATGGTTTCTT AGACGTCAGG TGGCACTTTT

*delta 2a

fnuDII/mvnI

bsh1236I

bstuI

nlaIV

acil

thai

hinli/acyl ahali/bsaHI

ddeI aatII

tru91 rcal msel bspHI

maell

nlaIII

haeIII/palI

maell psp14061

tru9I mseI

5101

stuI haeI

mn l I

23/27

rcaI bspHI

GGICAAAGIA AAAGAIGCIG AAGAICAGII GGGIGCACGA GIGGGITACA ICGAACIGGA ICICAACAGC GGIAAGAICC IIGAGAGIII ICGCCCCGAA CGGGGAAAIG IGCGCGGAC CCCIAITIGI ITAITITICI AAATACATIC AAATAIGTAT CCGCTCATGA GACAATAAC CIGATAAAIG CITCAATAAT GCCCCIITAC ACGCGCCIIG GGGALAAACA AATAAAAAGA ITTAIGTAAG ITTAIACATA GCCGAGTACT CIGITAITGG GACTAITIAC GAAGTIAITA TAACTITITC CIICICATAC ICATAAGIIG TAAAGGCACA GCGGGAATAA GGGAAAAAAC GCGGTAAAAC GGAAGGACAA AAACGAGIGG GICITIGCGA 3301 ATTGAANAG GAAGAGTATG AGTATTCAAC ATTTCCGTGT CGCCCTTATT CCCTTTTTTG CGGCATTTTG CCTTCCTGTT TTTGCTCACC CAGAAACGCT mbol/ndeIl[dam-] hphI dpnII (dambstYI/xhoII dpnI[dam+] alwI[dam-] sau3AI mbol/ndeII[dam-] **bsmAI** nspBII alwI[dam-] acil acil nlaIII dpnII[dam-] bstYI/xhoII dpn I [dam+] bsrBI fnu4HI sau3AI acil bsrI alw441/snol maelil tagi hgiAI/aspHI apaLI/snoI **bsp1286 DSIHKAI** mbol/ndelI[dam-] dpn1[dam+] bmy1 dpnII[dam-] sfant mboli[dam-] gau3AI eco57I earI/ksp632I hha1/cfoI hinpi Iloqu CGGGGAAATG 5201 5401

FIG. 6R

CCACTITCAT TITCTACGAC TICTAGICAA CCCACGIGCI CACCCAAIGI AGCIIGACCI AGAGIIGICG CCAIICIAGG AACICICAAA AGGGGGGCII

24/27

mcrI fnu4HI acil

bcqI

aha II/bsaHI

hinll/acyI

hgaI

caulI

dsay

fuuDlI/mvn1

acil

thaI

bsh12361

hinPI

ahalll/dral

bmyI

asp700 I umx

5501

msel

DSIHKAI

bsp1286 tru91

psp14061 maelI

hqiAI/aspHI

bstul

hpa I I

msp1

nc i I

SCIF1

fnu4HI

bbvI

scal hphI maeIII

5601 ATTCTCAGAA TGACTTGGTT

SUBSTITUTE SHEET (RULE 26)

bsrI

csp61

rsal

mbol/ndell[dam-] dpn[I[dam-] dpn [(dam+) sau3AI mbol/ndeIl{dam-}

TCCCCTTGAT dpn [dam+] alwI[dam-]

Bau3AI maeIII

nlaIII

nlaIII dpnII[dam-]

TIGCTAGEET CETGGETICE TEGATIGGEG MAAMACGIG TIGTACECEC TAGTACATIG AGEGGAACTA GCGGCCAACT TACTTCTGAC AACGATCGGA GGACCGAAGG AGCTAACCGC TTTTTTGCAC AACATGGGGG ATCATGTAAC hinpi

maeII hhaI/cfoI avili/fspl mstI

tru91 mseI

GCAGCAATGG CAACAACGTT GCGCAAACTA psp1406I Enu4HI

TTAACTGGCG

CGTCGTTACC GTTGTTGCAA CGCGTTTGAT AATTGACCGC bbvI

aluI

hpaII **DSAWI** nlaIV

GAGTACTICAC CAGTICACAGA AAAGGATICTT AGGATIGGA TGACAGTAAG AGAATTATIGI AGTIGITGICA TAACCATGAG GATGACGCCG GGCAAGAGCA ACTCGGTCGC CGCATACACT CTTGCAAAAG GTTACTACTC GTGAAAATTT CAAGACGATA CACCGCGCCA TAATAGGGCA CTACTGCGGC CCGTTCTCGT TGAGCCAGCG GCGTATGTGA TAAGAGICIT ACIGAACCAA CICAIGAGIG GICAGIGICI IIICGIAGAA IGCCIACGI ACIGICAIIC ICIIAATACG ICACGACGGI AIIGGIACIC foki nlalil 5801 CGTTGGGAAC CGGAGCTGAA TGAAGCCATA CCAAACGACG AGCGTGACAC CACGATGCCA GCAACCCTIG GCCICGACIT ACTICGGIAT GGIITGCIGC ICGCACIGIG GIGCIACGGI GAACGITITC CAATGATGAG CACTTTTAAA GITCTGCTAT GIGGCGCGGT ATTATCCCGT alul acil sfaNI hhaI/cfol maeIII sfaNI mbol/ndell[dam-] sau96I avalI asuI

dpn!![dam-] dpnI[dam+]

gau 3AI

haeIII/palI

mcrI mnll pvu1/bspCI

ACTATTGTGA CGCCGGTTGA ATGAAGACTG

Enu4HI cfrI eael

acil

5701 TGATAACACT

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	25	727	
	eam11051 G C		
CTGGCTGGTT SACCGACCAA	ed EATCTACACG ATAGATGTGC	GTTACTCAT	
bgli sau961 hae!II/palli asul mspl cfol hpall CG GCCTTCCGG (TATCGTAGT .	TCAGACCAA (
mspl hpall scrFl scrFl alul ncil tru9l fok! sau961 haelII/pall mael dsaV msel bsrI acil avall hinpl asul mspl mael caull asel/asnl/vspl mnli asul hal/cfol hpall AACTACTTAC TCTAGCTICC CGCCAACAAT TAATAGACTG CATCAAAGTTG CAGGACCACT TCTGGGCTGG GCCCTTCCGG CTGGCTGGTT TTGATGAATG AGATCGAAGG CCGGTAGTA ATTATCTGAC CTACCTCCGC CTATTTCAAC GTCCTGGTGA AGACGCGAGGCC GACCGAACGCCAA	acil mspl thai hpall fnuDil/mvni sau961 cfri01 bstUl asul nlalV hphl bsml2361 bbvl bsrl haelll/pall mnll gsuI/bpml bsal bshl2361 bbvl cacactece gccacatece gccacatece grategrace grategrategrace grategrace grategrace grategrategrace grategrace grategrategrategrategrategrategrace grategrategrategrategrategrategrategrate	ddei sau3Ai nlalV mbol/ndeIl[dam-] mnll dpn![dam+] hgiCl tru9I dpn![dam+] banl msel mae]]! TAGACAGA TCGCTGAGAT AGCTGCCTCA CTGATAAGC ATTGGTAACT GTTTACTCAT	
sau96I avall asul CAGGACCACT	sau961 asu1 laIV haeIII/palI GG GCCAGATGGT	tru9I mseI CTGATTAAGC GACTAATTCG	sau3Al mbol/ndeII[dam-] m-] dpnI[dam+]
I Gataaagttg Ctatttcaac	sau961 asu1 fnu4HI nlaIV bbvI bsrI haeIII/palI G CAGCACTGGG GCCAGATGG	nlalV m-j mnll hgici bani Accrecerca	g [
foki ti acli spi mnli to GATGGAGGG	acii thai fnubii/mvni bstui i bsh1236i b CGC GGTATCATTG	ddel nlalv mbol/ndell[dam-] mnll dpn![dam+] hgiCl dpn![dam-] banl rAGACAGA TCGCTGAGAT AGGTGCCTC	•
trugi fo msei bsri asel/asni/vspi AT TAATAGACTG	acil thal fnuDII/m bstUI bsmAl bsal bsh1236I TGGGTCTCGC GGTA	sa mb dp dp AATAGACAGA	tru91
mspi hpali scrfi ncii tx dsav ms cauli ase	mspI hpaII cfrl0I iv hphI bpmI G CCGTGAGCG	fok! AGGCAACTAT GGATGAACGA AA1 TCCGTTGATA CCTACTTGCT TTA	
msp hpa scrF aluf ncii rmai dsav maei caui	ms hp cfrl nlalv gsul/bpml AAATCTGGAG CC TTTAGACCTC GG	AGGCAACTAT	
	Tattgctgat Ataacgacta	pleI hinfI 6101 ACGGGGAGTC TGCCCTCAG	
5901	6001	6101	

61 FIG.

6201 ATATACTITA GAITGAITIA AAACTICATI

bstY1/xho11

tru91

ahalil/drai maei

tru91 msel

maell

nlallI rcal

alwi | dam- | bstYI/xhoII

tru9I

6301 TICGIICCAC IGAGGGICAG ACCCCGIAGA AAAGAICAAA GGAICTICII GAGAICCIII ITITCIGCGC GIAAICIGCI GCIIGCAAA AAAAAACA AAGCAAGGIG ACTCGCAGIC IGGGGCAICT ITICIAGIII CCIAGAAGAA CICIAGGAAA AAAAGACGCG CAITAGACGA CGAACGIIIG IIIIIIIGGI

mbol/ndell[dam-]

gau3AI

dpnII[dam-] dpnI[dam+]

alwI[dam-]

fnudHI

fnuDII/mvnI

mbol/ndell[dam-]

dpnI[dam+] sau3AI

dpn]I[dam-] bstY[/xhol] alwI[dam-]

nbol/ndeII[dam-]

sau3AI

bbv1

hha I/cfoI

bstY1/xhoII

dpn1[dam+] mbo11[dam-]

dpnII[dam-]

ddeI hgaI

mbol/ndell[dam-]

sau JAI

hinpi

bsh1236I

bstuI

dpn I I [dam-] alwi[dam-]

dpnI[dam+]

26/27

rmal mael CCGCTACCAG CGGTGGTTTG TTTGCCGGAT CAAGAGCTAC CAACTCTTTT TCCGAAGGTA ACTGGCTTCA GCAGAGCGCA GATACCAAAT ACTGTCCTTC GGCGATGGTC GCCACCAAAC AAACGGCCTA GTTCTCGATG GTTGAGAAA AGGCTTCCAT TGACCGAAGT CGTCTCGCGT CTATGGTTTA TGACAGGAAG TAGTGTAGCC GTAGTTAGGC CACCACTTCA AGAACTCTGT AGCACCGCCT ACATACCTCG CTCTGCTAAT CCTGTTACCA GTGGCTGCTG CCAGTGGCGA NTCACNICGG CAICAAICCG GIGGIGAAGI ICTIGAGACA ICGIGGCGGA IGIAIGGAGC GAGACGAIIA GGACAAIGGI CACCGACGAC GGICACCGCI CAGCITGGAG ATTCAGCACA GAATGGCCCA ACCTGAGTTC TGCTATCAAT GGCCTATTCC GCGTGGCCAG CCCGGACTTGC CCCCCAAGCA CGTGTGTCGG GTCGAACCTC aluī beri fnu4HI TGACTCAAG ACGATAGITA CCGGATAAGG CGCAGGGGTC GGGCTGAACG GGGGGTTCGT GCACACAGCC bbvI fnu4HI bbvI hglAI/aspHI alw44I/snoI apall/snol bsp1286 **DS1HKAI** hhaI/cfoI alvni bsrI bmyI hinpi maellI eco57I maelll En l I nspBff hinPl acif fuu4HI hha I/cfof bbvI acil hpa I I **Dsaw** mae[1] scfl aluI hpaII Idem hinfI haeIII/palI ple1 haeI 6601 TAACTCCTGT CTTACCGGGT hpall BCLFI caull ncil Idsm dsaV acil IIBdsu bslI

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6501

PCT/US96/20718

APPROVED O.G. FIG SUBCLASS CLASS BY WO 97/24440 DRAFTSMAN

fnutHI

hpall bali

Idsm

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acti

BSAMI

6701 CGAACGACCT ACACCGAACT GAGATACCTA CAGCGTGAGC ATTGAGAAAG CGCCACGCTT CCCGAAGGGA GAAGGCGGA CAGGTATCCG GTAAGCGGCA GCTIGCIGGA IGIGGCTIGA CICIATGGAI GICGCACICG IAACICITIC GCGGGCGAA GGGCTICCCCI CITICCGCCI GICCAIAGGC CAIICGCCGI

hhaI/cfoI

haeII

BcfI

27/27

asel/asnl/vspl tru91 nsel

hhaI/cfoI hinpi

acii

bari

nspBII IInad aluI

nlaIV

acil

6901 TITGIGATGC ICGICAGGGG

6801 GGGTCGGAAC AGGAGAGCGC ACGAGGGAGC TTCCAGGGGG AAACGCCTGG TATCTTTATA GTCCTGTCGG GTTTCGCCAC CTCTGACTTG AGCGTCGATT CCCAGCCTTG ICCTCTGGCG IGCTCCCTCG AAGGTCCCCC TITGCGGACC ATAGAAATAI CAGGACAGCC CAAAGCGGTG GAGACTGAAC ICGCAGCTAA

apy1[dcm+]

apy1[dcm+]

hhal/cfol alul

bstNI dsav

ecoRII **MVa**

dsav

bstni

bsaJI

ecoRII

BCIFI

mvaI

hgaI

mull drdI

GEGGAGEET ATGGAAAAAC GECAGETGGE ACGACAGGTT TEEEGAATGG AAAGGGGGGA GTGAGGGGAAA CGCAATTAAT

AAACACTACG AGCAGTCCCC CCGCCTCGGA TACCTTTTTG CGCTCGACCG TGCTGTCCAA AGGGCTGACC TTTCGCCCGT CACTCGCGTT GCGTTAATTA ^deltal.PVU

ecoRII SCIPI BVAI

deav . nlaIV bstNI

hgicI apyI(dcm+)

acti barBI

banl bsaJI moli I

maellI

hpall Idsm

GGCACCCCAG GCTTTACACT TTATGCTTCC GGCTCGTATG TTGTGGGAA TTGTGAGCGG ATAACAATTT CACACAGGAA CACTCAATGG AGTGAGTAAT CCGTGGGGTC CGAAATGTGA AATACGAAGG CCGAGCAIAC AACACACCTT AACACTCGCC TATTGTIAAA GTGTGTCCTT 7001 GIGAGITACC TCACTCAITA

asel/asnI/vspI tru91 meel

asp700 xmnl nlair

7101 ACAGCTATGA CCATGATTAC GAATTAA TGTCGATACT GGTACTAATG CTTAATT

>length: 7127

aatII (GACCTC):